Hello Bo and Ryan: See the comments below as well as the attached documents from Staker Parson Materials & Construction regarding the proposed Hot Mix Asphalt Blue Smoke Rule R307-313. Please reply back to verify you received this email. Also, please reach out to us if you have any questions.

Thank You,
Mike Dalley

Utah Air Quality Board of Directors
Utah Department of Environmental Quality
195 North 1950 West, Salt Lake City, UT 84116

Dear Members of the Air Quality Board:

Staker Parson Materials & Construction would like to comment on the proposed Hot Mix Asphalt Blue Smoke Rule R307-313 (addition of silo loading, silo unloading, asphalt tank controls). We have provided "red-line, strike-out" (RLSO) copies on the Rule, and UDAQ Blue Smoke Cost Analysis RLSO for your review as well, and would appreciate your response to those comments as well.

General Comments:

- What is the ultimate VOC reduction goal UDAQ wants to see from this Rule? Please address.
- Staker Parson Materials & Construction has included in this response a detailed spreadsheet showing the cost per ton of VOC reduction by adding the additional blue smoke controls. The cost per ton of VOC is much more than UDAQ has calculated. The feasibility of installing these types of controls does not seem to meet the "Feasibility Standard" UDAQ has set in evaluating these types of added controls.
- Concerns regarding this proposed Rule to Staker Parson:
    - The over generalization of estimated emissions. Please show detailed calculations for all emissions and cost assumptions.
    - Incorrect use of emission factors.
        - The UDAQ cost analysis stated that the emission factor of 0.032 was used to determine silo loading/silo unloading/tank filling. When in fact this is the emission factor for the calculation of VOC's when burning natural gas that goes through the baghouse and up the stack. No combustion of fuels is occurring during silo loading/silo unloading/tank filling. Please address.
        - Staker Parson has used silo loading, silo unloading, and tank filling emission factors previously submitted to UDAQ for NOI's, Approval Order modifications, and Emission Inventories, and has been accepted by UDAQ Engineering when calculating emissions. See the attached calculation spreadsheet. Please update with proper emission factors.

- General lack of transparency on emission calculations and data used to determine tons per year of VOC. Please provide more specific data where indicated.
- Lack of transparency on information obtained from blue smoke control equipment providers. Please state who has been contacted for equipment upgrades and cost estimates.

- In the case of silo unloading additional controls – Staker Parson has serious concerns on the safety and cost of adding additional equipment that will: (please address these concerns)
  - Block the loadout view to our facility staff creating a hazardous situation.
  - Possibly create a confined space situation for our facility staff and truck drivers.
  - Require significant structural modifications to our operations to incorporate the added blue smoke controls for asphalt loadout. Modifications would include increasing the height of our silos, modifying scales, modifying all electrical and hydraulic operations at a significant cost.
    - Staker Parson believes an estimated 74% reduction of VOC's from silo loading can be achieved by controls on HMA silo loading alone. Adding silo unloading controls greatly increases the cost per ton of VOC reduced, and also increases our safety concerns to our employees and customers.
- Will the added controls affect stack testing results? – Some methods of handling blue smoke from the silos is to vent the emissions back into the drum. (please address this concern)

Specific Comments:
Comments to proposed Hot Mix Asphalt (HMA) Blue Smoke Rule R307-313:

- Is there a goal in tons per year of VOC reduction concerning the 15 HMA plants? Please explain.
  - We believe a goal needs to be stated. Please address.
- Section 5.A) – We believe this Rule will have impacts on State Budgets, mostly UDOT. There will be increased costs to the cost of HMA for State projects due to the amount of cost needed to add blue smoke controls (BSC). Please address.
  - The cost to UDOT under this proposed Rule will be:
    - 40% of HMA production goes to UDOT. Based on 2022 asphalt production data, this increase could result in a 2.6 million dollar cost to UDOT (ultimately the tax payers of Utah).
- Section 5.B) – This Rule will have impacts on Local Governments. There will be increased cost added to the cost of HMA for local county, city, airport, and private projects due to the amount of cost needed to add BSC. Please address.
  - The cost to local groups under this proposed Rule will be:
    - 60% of HMA production will go to local production needs. Local counties, airports, private, and cities (ultimately the tax payers

within those cities and counties) will have to bear the cost of an increase of 3.8 million dollars.

- Section 5.D) – The cost analysis UDAQ has performed is not accurate and underestimates the cost to an HMA facility to incorporate BSC's. We would like to see a more detailed spreadsheet or cost sheet on UDAQ's cost reasoning. Please provide.
  - Staker Parson Materials & Construction has included a spreadsheet to show our costs per plant and overall. All numbers are based on 2020 production (per UDAQ baseline statement). SLEIS data was used when available.
  - Tons of VOC's in 2020 for silo loading/unloading/AC tank filling for all 4 HMA plants:
    - Silo loading: 7.31 tons
    - Silo unloading: 2.50 tons
    - AC tank filling: 1.25 tons
    - Total of 11.06 tons of VOC's for 4 HMA plants
  - Calculated VOC tons with added controls (per UDAQ estimated percentage):
    - Silo loading: 2.19 tons (70% reduction)
    - Silo unloading: 0.75 tons (70% reduction)
    - AC tank filling: 0.13 tons (90% reduction)
    - Total of 3.07 tons of VOC's for 4 HMA plants
  - Calculated tons net reduction and cost per ton:
    - Silo loading: 5.12 total tons for all 4 HMA plants
      - Cost per ton of VOC/yr reduced:

Beck Street	Point of Mtn	Keigley	Ogden
1.42 tons	1.44 tons	1.11 tons	1.15 tons
$105,111	$41,340	$53,688	$129,771

    - Silo unloading – 1.75 total tons
      - Cost per ton of VOC/yr reduced:

Beck Street	Point of Mtn	Keigley	Ogden
0.48 tons	0.49 tons	0.38 tons	0.39 tons
$492,801	$120,910	$157,318	$608,414

    - AC tank filling – 1.13 tons
      - Cost per ton of VOC/yr reduced:

Beck Street	Point of Mtn	Keigley	Ogden
0.29 tons	0.30 tons	0.27 tons	0.27 tons

$30,534	$29,609	$25,168	$27,635

- Section 5.E) – We do expect this Rule to have an impact on other government agencies. Please comment/review/update
- Section 5.F) – See Staker Parson Materials & Construction Cost spreadsheet. Please address.
- R307-313-1. Purpose:
  - See Rule redline strikeout (RLSO) Document for paragraph additions. Please address.
- R307-313-3 Definitions:
  - See "Blue Smoke" Definition in Rule RLSO document. Please add.
  - "Silo Loading" and "Silo Unloading" should both be defined. See Rule RLSO document. Please update.
- R307-313-3. Definitions:
  - See "Blue Smoke" Definition in Rule RLSO. Please add.
  - "Silo Loading" and "Silo Unloading" should both be defined. See Rule RLSO document. Please update.
- R307-313-4 .Blue Smoke and VOC Emissions from…….:
  - Please add "VOC" as shown in Rule RLSO document.
  - The following update should be added to this sentence, "The owner or operator shall operate emission capture and control systems at all times during the production of hot mix asphalt products, <u>except during the production of warm mix asphalt</u>. See Rule RLSO document. Please update.
- R307-313-7. Compliance Schedule.
  - The May 1, 2023 deadline is not feasible. A large amount of planning, securing capital, installation, and shut down/start up criteria has to be in place, and this cannot be met by the proposed date. Staker Parson Materials & Construction will have 4 large HMA production facilities to make these changes to with significant capital expenditure and structural additions. Installations to this degree will require a significant amount of time to accomplish.
  - The following process has to occur to install BCS's:
    - Obtain the capital to purchase additions – early 2024.
    - Equipment purchase and delivery – Depending on supply chain restrictions and demand (11 other HMA plants needing same BCS) – Late 2024 early 2025.
      - Late 2024 tank equipment received and installed. Installation will need to take place Dec 1 2024 – Mar 1 2025 during plant shut down times.
      - Late 2025, top of silo equipment received and installed. Installation of equipment Dec 2025 – Mar 2026.

Comments to UDAQ Hot Mix Asphalt Cost of Controls Overview - Proposed Rule: R307-313 (Date provided?)

- A red-line strike-out (RLSO) copy of the Cost Overview Document is attached for your review.
- It was stated that “site specific data was used”. See RLSO. Please provide for review.
- The stated “VOC emission factor of 0.032 lbs per ton” is for the combustion of natural gas, not the loading/unloading/tank filling. Please see the RLSO comment with emission factors Staker Parson used for its calculations. Please Review.
- “Facility HMA production maximum in published permits multiplied by VOC emission factor and divided by 2,000 to estimate PTE tonnage.” Please state why this was the case and not actual SLEIS data. See RLSO. Please address.
- “No AP-42 emission factor exists for asphalt tanks,”. We believe there are emissions factors for AC tanks. See RLSO. Please address.
- “an average of other sites was calculated (for one tank),”. See RLSO for comments from Staker Parson. Please address.
- “SLEIS data to produce the most accurate and up-to-date number for pieces of equipment.” See RLSO. Please address.
- “REMI projection factors”. Please See RLSO. Please address.
- “Projections were carried out normally for projection year 2023 without controls, but percentages of emissions were removed from projection year 2023 with controls on HMA plants and asphalt tanks. UDAQ assumed a 90% control rate for asphalt tanks and 70% for HMA plants loading and loadout systems based on conversions with control manufacturers and internal review of available emission reduction testing results.”
    - There are several comments on this section from Staker Parson. Please see RLSO. Please address.
- “Final Estimates” Section. Staker Parson has several comments. Please see RLSO. Please address.

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